

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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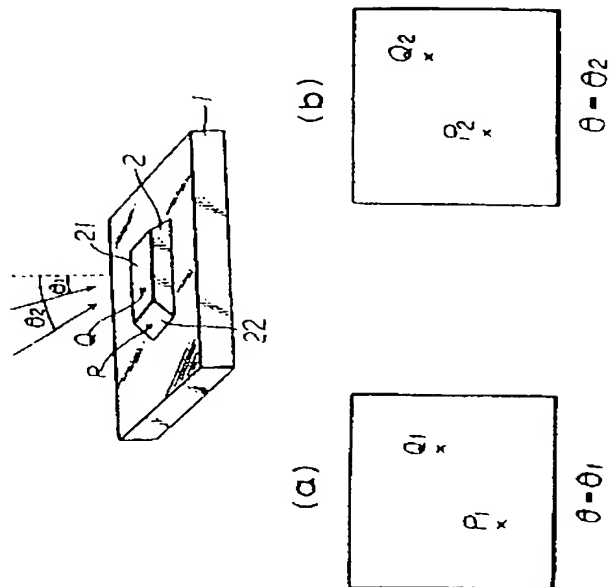
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TITLE : EVALUATION OF SURFACE SHAPE OF  
PATTERN



ABSTRACT : PURPOSE: To enable non-destructive and easy evaluation of a specimen, by scanning from a plurality of angles using an identifying mark on a pattern and determining a surface shape with correspondence to a plurality of image data.

CONSTITUTION: An identifying mark is applied by irradiation of a spot beam onto arbitrary points P, Q on a surface of a resist pattern 2 formed on a semiconductor wafer 1, electron beams are projected from angles  $\theta_1$ ,  $\theta_2$  from an electron-microscope and by 2-dimensional scanning, data are obtained as a 2-dimensional assembly of each projected point. The data of this single point represent luminance of the secondary electron from a signal point on the specimen and are treated as data of 2 bites and in these data, points  $P_1$ ,  $Q_1$ , and  $P_2$ ,  $Q_2$  which correspond to the marks P, Q are included and using these 2 points as the reference points, 1 against 1 correspondence is established. And, basing on data as well scanning angles brought to correspondence, a surface shape of the pattern is determined by calculation.

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